Digital Controller

FP23 Series

SHIMADEN

BASIC FEATURES

- 2-channel controller (Basic type: 1-channel controller)
- Independent 2-loop / 2-input operation control
- High accuracy ± (0.1% FS + 1 digit)
- High Sampling Cycle 0.1 sec.
- Highresolution 1/1000°Cdisplayachieved
  *Only for R.T.D. input (scale: 0.000~30.000 °C)
- Programmable Max. 400 steps
  (400 steps x 1 pattern to 20 steps x 20 patterns)
- Auto-Tuning PID / Expert PID
- Max. 10 Zone PID control available
- Independent Universal-Input
- User Friendly Operation (Menu Driven: 4 Lines LCD Display)
- Easy Setting & Maintenance via Infrared COM port on the front panel
- Interface RS-232C/RS-485 (MODBUS / Shimaden)
- The front dust/splash-proof IP66
- Universal Power Supply (100~240V AC ±10%)
- Sensor power supply

ORDERING INFORMATION

1-input Specification
- 1-output control

ITEM	CODE	SPECIFICATIONS
SERIES	FP23-	96 × 96 DIN size, high-performance programmable controller
BASIC FUNCTIONS	SS	Universal-input, 1-input/1-output control, 3 event outputs
CONTROL OUTPUT 1	Y	Contact 1c, contact rating: 240V AC 2.5A/resistive load, 1A/inductive load
	I	Current 4 ~ 20mA DC, Load resistance: max. 600Ω
	P	SSR drive voltage output 12V±1.5V DC, Load current: max. 30mA
	V	Voltage 0 ~ 10V DC, Load current: max. 2mA
CONTROL OUTPUT 2	N-	None
HEATER BREAK ALARM (FOR SINGLE-PHASE)	00	None
	31	Heater break alarm* (heater current 30A with CT) — * Selectable only when Control Output 1 is Y or P
	32	Heater break alarm* (heater current 50A with CT) — * Selectable only when Control Output 1 is Y or P
ANALOG OUTPUT 1	0	None
	3	0 ~ 10mV DC, Output resistance: 10Ω
	4	4 ~ 20mA DC, Load resistance: max. 300Ω
	6	0 ~ 10V DC, Load current: max. 2mA
ANALOG OUTPUT 2/ SENSOR POWER SUPPLY	0	None
	3	0 ~ 10mV DC, Output resistance: 10Ω
	4	4 ~ 20mA DC, Load resistance: max. 300Ω
	6	0 ~ 10V DC, Load current: max. 2mA
	8	Sensor power supply 24V DC 25mA
EXTERNAL INPUT/ OUTPUT CONTROL SIGNAL (DI/DO) *1	standard 0	DI 4 points, DO 5 points (start pattern No. switching not available)
	1	DI 10 points, DO 9 points (start pattern No. switching available)
	2	DI 10 points, DO 13 points (start pattern No. switching available)
COMMUNICATION FUNCTION	0	None
	5	RS-485 — Shimaden standard protocol / MODBUS (RTU/ASCII) communication protocol
	7	RS-232C — Shimaden standard protocol / MODBUS (RTU/ASCII) communication protocol
REMARKS	A	Without
	9	With

*1 When switching the start pattern No. by DI, 10 points of DI (CODE 1 or 2) are required.

OPTIONAL ACCESSORIES

Name	Model	Description
Infra-red Communication Adapter	S5004	USB connector cable (2m), Setup Software (CD-ROM)
Shunt Resistor	QCS002	250Ω ± 0.1%, external input resistance at current input
Relay Unit	AP2MC	Converts open collector output to contact output. 2 circuits built-in